CLAIMS

What is claimed is:

1. A method of controlling hardware resources in a device having a processor and a memory coupled to each other, the method comprising the steps of:

locating a first memory address in the memory associated with a first hardware resource;

transmitting control information associated with the first memory address to the first hardware resource; and

determining a pointer that is associated with the first address and locates a subsequent address associated with a subsequent hardware resource.

2. An appartatus for managing hardware resources in an electronic device having a controller and memory, the apparatus comprising:

means for locating a first memory address in the memory associated with a first hardware resource;

means for transmitting control information associated with the first memory address to the first hardware resource; and

means for determining a pointer that is associated with the first address and locates a subsequent address associated with a subsequent hardware resource.

3. In an electronic device having a processor, a memory, and at least one hardware resource coupled to each other, a method of dynamically implementing changes for scheduling the at least one hardware resource, the method comprising the steps of:

a) receiving a first list of addresses associated with the at least one hardware resource, the first list of addresses listing active operation information for the at least one hardware resource;

b) receiving a second list of addresses associated with the at least one hardware resource, the second list of addresses listing backup operation information for the at least one hardware resource;

c) receiving a request to modify an operation of the at least one hardware resource in a given category;

d) modifying the second list of addresses to reflect the request to modify the operation of the at least one hardware resource;

e) exchanging the active/backup status of the first list of addresses and the second list of addresses;

f) duplicating the active second address list as replacement for the backup first list of addresses; and

g) operating the at least one hardware resource according to the modified active-status second list of addresses.

4. An appartatus for dynamically implementing changes for scheduling at least one hardware resource in an electronic device having a controller and memory, the apparatus comprising:

means for receiving a first list of addresses associated with the at least one hardware resource, the first list of addresses listing active operation information for the at least one hardware resource;

means for receiving a second list of addresses associated with the at least one hardware resource, the second list of addresses listing backup operation information for the at least one hardware resource;

means for receiving a request to modify an operation of the at least one hardware resource in a given category;

means for modifying the second list of addresses to reflect the request to modify the operation of the at least one hardware resource;

means for exchanging the active/backup status of the first list of addresses and the second list of addresses;

means for duplicating the active second address list as replacement for the backup first list of addresses; and

means for operating the at least one hardware resource according to the active modified second list of addresses.

5. In an electronic device having a processor, a memory, and hardware resources coupled to each other, a method of operating the hardware resources comprising the steps of:

a) locating a current address in the memory, the current address containing operating information associated with a current hardware resource;

b) transmitting operating information associated with the current address to the current hardware resource; and

c) reading a pointer, which is associated with the current address, that identifies a subsequent address containing subsequent operating information.

6. The method of claim 5, wherein the method further comprises the step of:

d) determining whether the current hardware resource is reused within a system cyle.

7. The method of claim 6, wherein if the current hardware resource is reused within a system cyle, further comprising the step of:

e) saving the current hardware resource information from a current use; and

f) repeating steps b), c), and d) until the current hardware resource is not reused within a system cyle.

8. The method of claim 6, wherein if the current hardware resource is not reused within a system cyle, further comprising the steps of:

e) determining whether operation should be terminated; and

f) if operation should not be terminated, repeating steps a), b), c), and d) for a subsequent hardware resource that becomes the current hardware resource.

9. The method of claim 5, wherein the hardware resource is at least one of a searcher element, a downlink transmitter element, matched filter element, or tracker element.

10. An appartatus for dynamically implementing changes for scheduling hardware resources in an electronic device having a controller and memory, the apparatus comprising:

a) means for locating a current address in the memory, the current address containing operating information associated with a current hardware resource;

b) means for transmitting operating information associated with the current address to the current hardware resource; and

c) means for reading a pointer, which is associated with the current address, that identifies a subsequent address containing subsequent operating information.

11. The apparatus of claim 10, further comprising:

d) means for determining whether the current hardware resource is reused within a system cyle.

12. The apparatus of claim 11, wherein if the current hardware resource is reused within a system cyle, further comprising:

e) means for saving the current hardware resource information from a current use.

13. The apparatus of claim 11, wherein if the current hardware resource is not reused within a system cyle, further comprising:

e) means for determining whether operation should be terminated.

14. The apparatus of claim 10, wherein the hardware resource is at least one of a searcher element, a downlink transmitter element, matched filter element, or tracker element.

15. In a communication device having a processor, a memory, and hardware resources all coupled to each other, a method of generating a scheduler for managing the hardware resources of the communication device, the method comprising the steps of:

a) receiving a quantity of available hardware resources;

b) generating a list in the memory for linking requests to the hardware resources;

c) receiving a desired quantity of hardware resources to be operated in the communication device;

d) receiving hardware resources operation information;

e) receiving a request to use at least one of the hardware resources;

f) assigning a memory address to the hardware resource operation information for each of the hardware resources; and

g) linking the memory addresses of hardware resources.

16. The method of claim 15, wherein the list is a table listing all virtual resources available for a given function.

17. The method of claim 15, wherein the list includes a primary table and a secondary table, the primary table tracking a group allocation and the secondary table mapsping virtual uses.

18. An appartatus for generating a scheduler for managing the hardware resources of the communication device having a controller and memory, the apparatus comprising:

a) means for receiving a quantity of available hardware resources;

b) means for generating a list in the memory for linking requests to the hardware resources;

c) means for receiving a desired quantity of hardware resources to be operated in the communication device;

d) means for receiving hardware resources operation information;

e) receiving a request to use at least one of the hardware resources;

f) means for assigning a memory address to the hardware resource operation information for each of the hardware resources; and

g) means for linking the memory addresses of hardware resources.

19. The apparatus of claim 18, wherein the list is a table listing all virtual resources available for a given function.

20. The method of claim 18, wherein the list includes a primary table and a secondary table, the primary table tracking a group allocation and the secondary table mapping virtual uses.